

was selected in 1958 as site for a national observatory intensive 3-year survey that included more than 150 ranges across the United States.

combination of clear weather, minimum air turbulence, freedom from bright lights, vegetation cover, height and commitment area were all factors leading to the final selection of Kitt Peak.

It is located in the Quinlan Mountains of the Sonoran Desert, the Papago Reservation. The reservation, one of the largest in the United States, is the home of more than 17,000 Papagos and spreads some 90 miles across Arizona's Pima and Pinal counties.

The Papagos leased Kitt Peak to the Observatory under the terms of a perpetual agreement that is valid as long as scientific facilities are maintained at the site.

The Observatory is supported by the National Science Foundation, an agency of the Federal Government established in 1950 to advance scientific progress in the United States. In 1957, AURA entered into a contract with the Association of Universities for Research in Astronomy (AURA), Inc., for the operation of Kitt Peak as a national center for optical astronomy. Under the terms of the original contract and subsequent agreements, AURA has been responsible for the construction, development, and continuing operation of Kitt Peak as a national research facility.

AURA is a non-profit corporation in Arizona. In 1957, AURA grew from its original 7 charter members to the present 13 members, all with strong research and graduate training programs in astronomy.

Member institutions are:

- University of Arizona
- California Institute of Technology
- University of California
- University of Chicago
- University of Colorado at Boulder
- Harvard University
- University of Hawaii
- University of Illinois
- University of Michigan
- State University of New York
- Yale University
- University of Texas at Austin
- University of Wisconsin
- University of Washington

*University of Arizona  
16 & 18 Nov*

*7 Nov Cornell  
university*

*14 & 18 Nov Stanford*

*11 Oct Dreyer*

As a national center, Kitt Peak allocates 60 percent of its telescope time to qualified visiting astronomers from all over the world. Allocation of users is based entirely upon the merit of the research programs proposed. The remaining 40 percent of available telescope time is used by the Observatory for its own research.

In addition to its contract with the NSF, AURA also operates the Cerro Tololo Inter-American Observatory in Chile.

For more information: Write Public Information Office, National Observatory, P.O. Box 26732, Tucson, AZ, 85726.

# kitt peak national observatory

a walking tour



# S U. MAYALL 4-METER TELESCOPE

Approved For Release 2000/08/07 : CIA-RDP96-00788R001-0

a fused quartz mirror 4 meters, or 130 inches, in diameter. The telescope is the nation's second largest optical telescope.

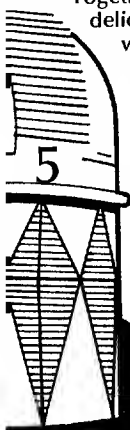
Together the telescope and the mounting weigh 375 tons, yet they are so delicately balanced that accurate tracking of celestial objects is achieved with a small one-half horsepower motor.

With this instrument astronomers can study objects as faint as 23rd magnitude—more than six million times fainter than the dimmest star visible with the unaided eye.

Darkrooms, laboratories, offices, and sleeping quarters are housed in the 19-story-high structure. The movable dome weighs 500 tons; the shutter opening measures 30 feet across. The building itself is 105 feet in diameter.

An elevator provides access to a glass-enclosed observation deck that presents a panoramic view of the observatory; from there steps lead to a telescope viewing gallery for visitors.

The telescope was dedicated in June, 1973, and is named for Dr. Nicholas U. Mayall, former Director of the Kitt Peak National Observatory.



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## ELEVATION

The summit of the mountain lies just North of the 4-meter telescope, at an elevation of 2098 meters (6882 feet).

2.3-METER TELESCOPE

50-CM TELESCOPE

MITORY

GRAPH

30-CM SCHMIDT TELESCOPE

REST

ational Observatory, you will note that some points of by numbers—both on this map and on the mountain below is a brief description of each site.

1-meter telescope, with the McMath Solar Telescope. You will be looking south. Behind you stand six of the 13 at Kitt Peak: the 1.3-meter infrared, and the 30-centimeter at the three telescopes of the University of Arizona; 1-meter Nicholas U. Mayall telescope dome is visible. Altar Valley and, visible some 18 miles to the o your right) is the town of Sells, tribal headquarters. The distinctive dome-shaped mountain peak due ri, traditional home of the Papago Indian God I-I'toy. a schematic diagram of the McMath Solar Telescope. ers can obtain a picture of the telescope with the ground from this point.

vel, photographers find nearly the entire sweep of telescopes before them. The large telescope building houses the University of Arizona's 2.3-meter telescope. you are standing 29 meters, or 96 feet, above the p. The Visitor's Gallery provides a view in all s of 100 miles on most days, and special non-glare is area enhances picture taking. To help with along the gallery show the four points of the compass of surrounding towns. Mountain ranges visible to the ed in Mexico.

iles down this roadway is the Picnic Area with cooking rnk machines, drinking water and restrooms for your beauty, the Picnic Area itself draws many nature

## 1.3-METER TELESCOPE

emphasis on infrared astronomy, this telescope observations of objects such as stars embedded st clouds that would be invisible in the visible model for all infrared modifications ak telescopes.

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Telescope. You will find that your Walking Tour agree with the structures visible atop the mount

# Welcome to the kitt peak national observatory

## A Walking Tour

As national center for ground-based optical astronomy, Kitt Peak the largest collection of astronomical instruments in the world. So over the world use Kitt Peak facilities for research programs in st planetary studies.

In addition to visiting scientists, over 50 people are employed o but only the necessary support staff lives there. Resident astronom in Tucson. During observing periods, they, as well as visiting sc dormitory rooms at Kitt Peak.

Kitt Peak is open to the public from 10 a.m. to 4 p.m. ev Christmas. There is no charge or ticket for admission. Regularly sc the Observatory are conducted at 10:30 a.m. and 1:30 p.m. Sunday and holiday. All tours begin at the Visitor Center.

Although no food (other than candy and soft drinks) is sold on t grounds, a picnic area is provided with tables, benches, and fire pi

This Walking Tour Guide has been prepared for visitors who scheduled tour or wish to tour the facilities on their own. Please for a handy reference to the National Observatory.

Your interest in the Observatory's programs and facilities is a sincerely hope that your visit to Kitt Peak will be an en informative—occasion.

## VISITOR'S CENTER

Exhibits feature many aspects of astronomy, including models of telescopes and the research programs being conducted at Kitt Peak. Visitors can operate an actual solar telescope, and Kitt Peak-produced films are shown on weekends and holidays. Papago handicrafts and various mementos of the Observatory are available at the gift shop.



A 1-meter coelostat m sunlight to meter (41-i forming m sends the down thro tanks hous meter-high tower—desi imize the to the obsv Its daily n solar mag give scient understand complex p occur with The Vacuu is also us solar veloc spectra, a ported NA program b constantly formation e ity for the e nauts.

1.3-METER TELESCOPE

ADMINISTRATION BUILDING

MAINTENANCE SHOPS

EMPLOYEE'S DINING HALL

: CIA-RDP96-00788R001-0